## REMARKS/ARGUMENTS

Applicant has carefully reviewed and considered the Final Office Action (FOA) mailed on May 24, 2011, and the references cited therewith.

Claims 96, 102, 104, and 106 are amended, claims 1-95 are canceled, and no claims are added; as a result, claims 96-106 are now pending in this application.

### *Examiner Interview Summary*

Applicant thanks Examiner Kathleen Sonnett for the courtesy of a telephone interview on June 27, 2011. Applicant and Examiner Sonnett appeared to reach agreement that independent claims 96, 104, and 106 and the remarks, as presented herein, would overcome the rejections presented in the present FOA. Applicant thanks Examiner Sonnett for her time and consideration.

### *Claim Objections*

Claims 102 and 104 were objected to because of the following informalities: there appears to be a typographical error in claim 102, lines 3-4: "comprising and at least one female..."; "one" should be deleted from "second one distal stents" in claim 104, line 8.

Applicant has amended claims 102 and 104 to overcome the objections thereto. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the objections to claims 102 and 104.

### *§ 112 Rejection of the Claims*

Claims 102 and 103 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant has amended claims 102 to overcome the § 112 rejection thereof. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 112 rejection of claims 102 and 103.

*§ 103 Rejection of the Claims*

Claims 96-99 and 101-103 were rejected under 35 USC § 103(a) as being allegedly unpatentable over Martin (U.S. Patent No. 5,575,817) in view of Hillstead (U.S. Patent No. 4,856,516), Cottone, Jr. (U.S. Patent No. 5,549,663), and Lassiter, et al. (U.S. Patent No. 1,417,393). Applicant respectfully traverses the rejection as follows.

Applicant notes that section 6 of the present FOA appears to acknowledge that the Martin '817, Hillstead, and Cottone references do not teach that a male engaging portion has a frustoconical configuration that flares outward from a proximal end of an elongate cylinder from a medial portion to a distal end of a distal stent. However, section 8 appears to indicate that the Lassiter reference teaches the same. Insofar as the rejection applies to the claims of the present application, as currently amended, Applicant respectfully disagrees for at least the following reasons.

The Lassiter reference, for instance, appears to teach, as illustrated in Figures 11, 12, and 15 and described in column 3, lines 93-108:

> The shoulders 33 of the mandrel 19 limit the insertion of the pipe ends 34 to the exact degree while the surfaces 31 fit within and support the pipe ends adjacent their extremities during the shaping and welding action. The extremity of each **pipe end** is initially, or by the spreading action of portion 32 of the mandrel leg entering the same, enlarged or expanded, as at 35, and fits around the mandrel surface 32, thus **providing a shoulder** 36, and the surfaces 26 of the dies contact the extremities of the **legs**, as at 37, about the body of the pipe beyond said shoulder 36, **forming a shoulder portion** 38 in the leg which contacts with and **lies beyond the shoulder** 36.

Accordingly, Applicant respectfully submits that, as shown in Figure 11 of the Lassiter reference, the shoulders 33 of the mandrel 19 limit the insertion of the

pipe ends 34 to the exact degree while the surfaces 31 fit within and support the **pipe ends** adjacent their extremities during the shaping and welding action and the extremity of each **pipe end** is initially, or by the spreading action of portion 32 of the mandrel leg entering the same, enlarged or expanded, as at 35, and fits around the mandrel surface 32, thus **providing a shoulder** 36.

That is, the shoulder of the mandrel appears to expand the extremity of the pipe end during the shaping and welding action to provide the shoulder to the pipe end, where on each side of the shoulder (which the Examiner appears to equate to a frustoconical configuration, although Applicant does not admit to same) the pipe end continues for a distance in a straight tubular configuration. In particular, the pipe end continues for a distance in a straight tubular configuration on a distal side of the shoulder to be inserted into the leg, as shown in Figure 15.

In addition, Applicant respectfully submits that, as shown in Figures 12 and 15, the surfaces 26 of the dies contact the extremities of the legs, as at 37, about the body of the pipe beyond the shoulder 36, **forming a shoulder portion** 38 in the leg which contacts with and **lies beyond the shoulder** 36.

That is, the surfaces of the dies appear to compress the extremities of the legs from an original configuration about the body of the pipe beyond a shoulder of the pipe, thereby **forming a shoulder portion** in the leg which contacts with and **lies beyond the shoulder of the pipe**. As shown in Figure 15, the leg appears to include a straight tubular configuration on a distal side of the shoulder (which the Examiner appears to equate to a tapering portion, although Applicant does not admit to same) that continues for a distance outside the pipe.

Further, the Lassiter reference appears to teach in column 3, lines 108-113:

> **By this construction** a mechanical interlock between the leg and pipe is provided which reinforces the weld and tends to prevent possible separation of the parts under strains and thus adds to the security of the connection.

Hence, Applicant respectfully submits that the Lassiter reference does not teach a proximal stent having a proximal end and a distal end, the proximal stent

further having a proximal orifice at the proximal end to be located in and when expanded to be supported by a vascular vessel, at least one distal stent having a proximal end and a distal end comprising a male engaging portion having a frustoconical configuration that flares outward on the proximal end from an elongate cylinder extending from a medial portion to the distal end of the at least one distal stent, the proximal stent having two transversely placed tapering portions that extend from an intermediate portion to the distal end of the proximal stent to reinforce the bifurcated lumen, and the proximal stent also having at least one distal orifice at the distal end of at least one of the tapering portions which when in an expanded configuration serves to receive the male engaging portion having the frustoconical configuration of the at least one distal stent completely within a female engaging portion of the distal orifice, where the frustoconical configuration terminates at the proximal end of the at least one distal stent and the tapering portions terminate at the distal end of the proximal stent and wherein the distal orifice remains in the expanded configuration after receiving the male engaging portion.

In contrast, Applicant's independent claim 96, as currently amended, presently recites in part:

> a proximal stent having a proximal end and a distal end, the proximal stent further having a proximal orifice at the proximal end to be located in and when expanded to be supported by a vascular vessel;
>
> at least one distal stent having a proximal end and a distal end comprising a male engaging portion having a frustoconical configuration that flares outward on the proximal end from an elongate cylinder extending from a medial portion to the distal end of the at least one distal stent;
>
> the proximal stent having two transversely placed tapering portions that extend from an intermediate portion to the distal end of the proximal stent to reinforce the bifurcated lumen;
>
> the proximal stent also having at least one distal orifice at the distal end of at least one of the tapering portions which when in an expanded configuration serves to receive the male engaging portion having the frustoconical configuration of the at least one distal stent completely within a female engaging portion of the distal orifice,

> wherein the frustoconical configuration terminates at the proximal end of the at least one distal stent and the tapering portions terminate at the distal end of the proximal stent and wherein the distal orifice remains in the expanded configuration after receiving the male engaging portion;

As such, Applicant respectfully submits that the Martin '817, Hillstead, Cottone, and Lassiter references, individually or in combination, do not teach, suggest, or render obvious each and every element and limitation of Applicant's independent claim 96, as currently amended. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 103 rejection of independent claim 96, as currently amended, as well as those claims that depend therefrom.

Claim 100 was rejected under 35 USC § 103(a) as being allegedly unpatentable over Martin '817 in view of Hillstead, Cottone, and Lassiter as applied to claim 96 above and further in view of Liebig (U.S. Patent No. 3,805,301). Applicant respectfully traverses the rejection as follows.

Claim 100 depends from independent claim 96. As presented above, Applicant respectfully submits that independent claim 96 is in condition for allowance in view of the deficiencies of the teachings of the Martin '817, Hillstead, Cottone, and Lassiter references. Applicant respectfully submits that the Liebig reference does not cure the deficiencies of the Martin '817, Hillstead, Cottone, and Lassiter references. For instance, the Martin '817, Hillstead, Cottone, Lassiter, and Liebig references, individually or in combination, do not teach, suggest, or render obvious:

> a proximal stent having a proximal end and a distal end, the proximal stent further having a proximal orifice at the proximal end to be located in and when expanded to be supported by a vascular vessel;
>
> at least one distal stent having a proximal end and a distal end comprising a male engaging portion having a frustoconical configuration that flares outward on the proximal end from an elongate cylinder extending from a medial portion to the distal end of the at least one distal stent;

> the proximal stent having two transversely placed tapering portions that extend from an intermediate portion to the distal end of the proximal stent to reinforce the bifurcated lumen;
>
> the proximal stent also having at least one distal orifice at the distal end of at least one of the tapering portions which when in an expanded configuration serves to receive the male engaging portion having the frustoconical configuration of the at least one distal stent completely within a female engaging portion of the distal orifice, wherein the frustoconical configuration terminates at the proximal end of the at least one distal stent and the tapering portions terminate at the distal end of the proximal stent and wherein the distal orifice remains in the expanded configuration after receiving the male engaging portion;

as recited in Applicant's independent claim 96, as currently amended.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 103 rejection of dependent claim 100.

Claims 104 and 106 were rejected under 35 USC § 103(a) as being unpatentable over Martin (U.S. Patent No. 5,653,743) in view of Hillstead, Cottone, and Lassiter. Applicant respectfully traverses the rejection as follows.

Applicant notes that section 15 of the present FOA appears to acknowledge that the Martin '743, Hillstead, and Cottone references do not teach which stent forms the male engaging portion and which stent forms the female engaging portion, as well as the claimed tapering of these regions. However, section 16 appears to indicate that the Lassiter reference teaches the same. Insofar as the rejection applies to the claims of the present application, as currently amended, Applicant respectfully disagrees for at least the following reasons.

The Lassiter reference, for instance, appears to teach, as illustrated in Figures 11, 12, and 15 and described in column 3, lines 93-108:

> The shoulders 33 of the mandrel 19 limit the insertion of the pipe ends 34 to the exact degree while the surfaces 31 fit within and support the pipe ends adjacent their extremities during the shaping and welding action. The extremity of each **pipe end** is initially, or by the spreading action of portion 32 of the mandrel leg entering the

> same, enlarged or expanded, as at 35, and fits around the mandrel surface 32, thus **providing a shoulder** 36, and the surfaces 26 of the dies contact the extremities of the **legs**, as at 37, about the body of the pipe beyond said shoulder 36, **forming a shoulder portion** 38 in the leg which contacts with and **lies beyond the shoulder** 36.

Accordingly, Applicant respectfully submits that, as shown in Figure 11 of the Lassiter reference, the shoulders 33 of the mandrel 19 limit the insertion of the pipe ends 34 to the exact degree while the surfaces 31 fit within and support the **pipe ends** adjacent their extremities during the shaping and welding action and the extremity of each **pipe end** is initially, or by the spreading action of portion 32 of the mandrel leg entering the same, enlarged or expanded, as at 35, and fits around the mandrel surface 32, thus **providing a shoulder** 36.

That is, the shoulder of the mandrel appears to expand the extremity of the pipe end during the shaping and welding action to provide the shoulder to the pipe end, where on each side of the shoulder (which the Examiner appears to equate to a frustoconical configuration, although Applicant does not admit to same) the pipe end continues for a distance in a straight tubular configuration. In particular, the pipe end continues for a distance in a straight tubular configuration on a distal side of the shoulder to be inserted into the leg, as shown in Figure 15.

In addition, Applicant respectfully submits that, as shown in Figures 12 and 15, the surfaces 26 of the dies contact the extremities of the legs, as at 37, about the body of the pipe beyond the shoulder 36, **forming a shoulder portion** 38 in the leg which contacts with and **lies beyond the shoulder** 36.

That is, the surfaces of the dies appear to compress the extremities of the legs from an original configuration about the body of the pipe beyond a shoulder of the pipe, thereby **forming a shoulder portion** in the leg which contacts with and **lies beyond the shoulder of the pipe**. As shown in Figure 15, the leg appears to include a straight tubular configuration on a distal side of the shoulder (which the Examiner appears to equate to a tapering portion, although Applicant does not admit to same) that continues for a distance outside the pipe.

Further, the Lassiter reference appears to teach in column 3, lines 108-113:

> **By this construction** a mechanical interlock between the leg and pipe is provided which reinforces the weld and tends to prevent possible separation of the parts under strains and thus adds to the security of the connection.

Hence, Applicant respectfully submits that the Lassiter reference does not teach a proximal stent having a proximal end and a distal end, the proximal stent being expandable and having a proximal orifice at the proximal end, first and second distal stents each having a proximal end and a distal end comprising a male engaging portion having a frustoconical configuration that flares outward on the proximal end from an elongate cylinder extending from a medial portion to the distal end of the first and second distal stents, the proximal stent having two transversely placed tapering portions that extend from an intermediate portion to the distal end of the proximal stent to reinforce the bifurcated lumen, and the proximal stent also having a distal orifice at the distal end of at least one of the tapering portions that when in an expanded configuration receives the male engaging portion having the frustoconical configuration of at least one proximal end of the first and second distal stents completely within a female engaging portion of the distal orifice, where the frustoconical configuration terminates at the proximal end of the first and second distal stents and the tapering portions terminate at the distal end of the proximal stent and wherein the distal orifice remains in the expanded configuration after receiving the male engaging portion.

In contrast, Applicant's independent claim 104, as currently amended, presently recites in part:

> a proximal stent having a proximal end and a distal end, the proximal stent being expandable and having a proximal orifice at the proximal end;
>
> first and second distal stents each having a proximal end and a distal end comprising a male engaging portion having a frustoconical configuration that flares outward on the proximal end from an elongate cylinder extending from a medial portion to the distal end of the first and second distal stents;

the proximal stent having two transversely placed tapering portions that extend from an intermediate portion to the distal end of the proximal stent to reinforce the bifurcated lumen;

the proximal stent also having a distal orifice at the distal end of at least one of the tapering portions that when in an expanded configuration receives the male engaging portion having the frustoconical configuration of at least one proximal end of the first and second distal stents completely within a female engaging portion of the distal orifice, wherein the frustoconical configuration terminates at the proximal end of the first and second distal stents and the tapering portions terminate at the distal end of the proximal stent and wherein the distal orifice remains in the expanded configuration after receiving the male engaging portion;

In addition, independent claim 106, as currently amended, presently recites:

a proximal stent and a pair of distal stents each having a proximal end and a distal end, the proximal stent being expandable and having the distal end and a proximal orifice at the proximal end, the proximal stent having two transversely placed tapering portions that extend from an intermediate portion to the distal end of the proximal stent to reinforce the bifurcated lumen, the proximal stent also having two distal orifices at the distal ends of the tapering portions which when in an expanded configuration serve to receive the proximal ends of the pair of distal stents comprising a male engaging portion each having a frustoconical configuration that flares outward on the proximal end from an elongate cylinder extending from a medial portion to the distal end, wherein the male engaging portions having the frustoconical configurations of the pair of distal stents are each positioned completely within a female engaging portion of each of the two distal orifices, wherein the frustoconical configuration terminates at the proximal ends of the pair of distal stents and the tapering portions terminate at the distal end of the proximal stent and wherein each of the two distal orifices remain in the expanded configuration after receiving the male engaging portion, wherein each of the proximal and distal stents comprises an expandable stent constructed with a wire skeleton having one or more parts that extends from the respective proximal ends to the respective distal ends to further reinforce the bifurcated lumen, wherein the proximal stent and the at least one distal stent each comprises a plurality of hoops which are axially displaced in a tubular configuration along a common axis, each of said hoops being formed by a substantially complete turn of a sinuous wire having apices and having a circumference that lies in a plane substantially perpendicular

> to the longitudinal axis of said stent, wherein apices of adjacent hoops are juxtaposed to one another and at least two juxtaposed apices are connected by a securing means, and wherein cross-sectional areas of each of the two distal orifices of the proximal stent when expanded are sufficiently less than cross-sectional areas of each of the proximal ends of the distal stents when expanded within the distal orifices to at least partially secure together the proximal and distal stents at the distal orifice when the proximal end of the distal stents are expanded therein.

As such, Applicant respectfully submits that the Martin '743, Hillstead, Cottone, and Lassiter references, individually or in combination, do not teach, suggest, or render obvious each and every element and limitation of Applicant's independent claims 104 and 106, as currently amended. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 103 rejection of independent claims 104 and 106, as currently amended, as well as those claims that depend therefrom.

Claim 105 was rejected under 35 USC § 103(a) as being unpatentable over Martin '743 in view of Hillstead, Cottone, and Lassiter as applied to claim 104 above and further in view of Chuter (U.S. Patent No. 5,562,726). Applicant respectfully traverses the rejection as follows.

Claim 105 depends from independent claim 104. As presented above, Applicant respectfully submits that independent claim 104 is in condition for allowance in view of the deficiencies of the teachings of the Martin '743, Hillstead, Cottone, and Lassiter references. Applicant respectfully submits that the Chuter reference does not cure the deficiencies of the Martin '743, Hillstead, Cottone, and Lassiter references. For instance, the Martin '743, Hillstead, Cottone, Lassiter, and Chuter references, individually or in combination, do not teach, suggest, or render obvious:

> a proximal stent having a proximal end and a distal end, the proximal stent being expandable and having a proximal orifice at the proximal end;

> first and second distal stents each having a proximal end and a distal end comprising a male engaging portion having a frustoconical configuration that flares outward on the proximal end from an elongate cylinder extending from a medial portion to the distal end of the first and second distal stents;
>
> the proximal stent having two transversely placed tapering portions that extend from an intermediate portion to the distal end of the proximal stent to reinforce the bifurcated lumen;
>
> the proximal stent also having a distal orifice at the distal end of at least one of the tapering portions that when in an expanded configuration receives the male engaging portion having the frustoconical configuration of at least one proximal end of the first and second distal stents completely within a female engaging portion of the distal orifice, wherein the frustoconical configuration terminates at the proximal end of the first and second distal stents and the tapering portions terminate at the distal end of the proximal stent and wherein the distal orifice remains in the expanded configuration after receiving the male engaging portion;

as recited in Applicant's independent claim 104, as currently amended.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the § 103 rejection of dependent claim 105.

## CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's below listed attorney at 612-236-0126 to facilitate prosecution of this matter.

CERTIFICATE UNDER 37 CFR §1.8: The undersigned hereby certifies that this correspondence is being electronically filed with the United States Patent and Trademark Office on this 30th day of June, 2011.

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